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Fourteen New *Laena* (Coleoptera, Tenebrionidae) from China, Vietnam and Thailand¹⁾

By

Kimio MASUMOTO

Institute of Human Living Sciences, Otsuma Women's University,
12, Sanbancho, Chiyoda-ku, Tokyo, 102 Japan

Abstract Fourteen new species of the tenebrionid genus *Laena* are described from central and southwestern China, northern Vietnam and northern Thailand: *L. yasukii* sp. nov., *L. yufengsi* sp. nov., *L. jizushana* sp. nov., *L. angulifemoralis* sp. nov., *L. youcida* sp. nov., *L. xuerenensis* sp. nov., and *L. tumidoculata* sp. nov. (Yunnan Sheng); *L. emeishana* sp. nov. (Sichuan Sheng); *L. shaanxiica* sp. nov., *L. imurai* sp. nov. and *L. fengileana* (Shaanxi Sheng); *L. tamdaoensis* sp. nov. (Northern Vietnam); *L. fangensis* sp. nov. and *L. angkhangensis* sp. nov. (Northern Thailand).

The adeliine tenebrionid genus *Laena* LATREILLE, 1829, is usually found under humus in temperate broadleaved forests and comprises more than 200 described species widely distributed in the Palearctic and Oriental Regions. They are small and apterous, and characterized by the body strongly constricted between fore and hind parts, the elytra with setiferous umbilicate pores, and the femora often angulate or spined.

In the course of the Sino-Japanese survey of soil zoology made in southwestern China in the autumn of 1995, Dr. Shun-Ichi UENO and Prof. Yasuaki WATANABE made a small collection of *Laena* specimens in the thick forests on the mountains in the vicinities of Dali City, Yunnan Sheng, and also on Mt. Emei Shan, Sichuan Sheng. They were submitted to the author for taxonomic study. In his private researches of carabid beetles in Shaanxi Sheng, Central China, Dr. Yûki IMURA obtained a short series of specimens of this genus and allowed the author to study them. The author has also kept some unknown species from northern Vietnam and northern Thailand in his collection. Besides, Mr. Stanislav BEČVÁŘ lately provided the author some *Laena* specimens of his collection from Yunnan. All these materials have been carefully examined and will be described in the present paper.

The type depositories will be given in the text.

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The abbreviations used herein are as follows: NSMT – National Science Museum (Nat. Hist.), Tokyo; SIE – Shanghai Institute of Entomology, Academia Sinica; MC – Masumoto collection; BC – Bečvář collection.

I. Yunnanese Species

*Laena** *yasuakii* sp. nov.

(Fig. 1)

Brownish yellow, with fronto-clypeal borders and the border between head and gula darker in colour, eyes blackish (the holotype is somewhat immature judging from the male genitalia); dorsal surface and ventral surfaces of head and prothorax gently, somewhat vitreously shining, abdominal sternites feebly and somewhat alutaceously shining; dorsal surface rather noticeably clothed with fine bent hairs, ventral surface also clothed with finer bent hairs. Rather elongate and gently convex above though feebly and broadly flattened in the median parts.

Head subquadrate, feebly convex posteriad, rather closely punctate; clypeus transversely hexagonal, declined to apex, fronto-clypeal and fronto-genal borders finely sulcate and somewhat bisinuous; genae gently raised, with rounded outer margins; frons rather wide and flattened, depressed and rugoso-punctate on each side; eyes small, roundly convex laterad, triangularly inlaid into head, diameter about 7 times the width of an eye diameter. Antennae reaching base of elytra, ratio of the length of each segment from basal to apical: 0.37, 0.2, 0.37, 0.24, 0.26, 0.24, 0.24, 0.25, 0.25, 0.26, 0.53.

*REITTER (1899) erected the subgenus *Catolaena* to contain species of *Laena* s. str. which lack the marginations along lateral margins of the pronotum. In the course of the current study the author has observed that this character varies continuously across species of the genus *Laena* and that in the case of some species it is difficult to decide whether a ridge is present or absent. For these reasons the author has decided not to follow REITTER's proposed division of *Laena* into a subgenus. The degree of development of the lateral pronotal marginations has, however, been described in detail in the species descriptions in the text.

Pronotum subquadrate, 1.15 times as wide as long, widest at apical 1/3, wider at apex than at base; apex very slightly emarginate, ridged on each side; base almost straight and finely rimmed; sides gently declined to gently produced lateral margins, which are finely ridged and crenulate, visible from above; front angles slightly subrectangular, hind angles widely rounded; disc feebly convex, rather closely punctate.

Elytra oblong-ovate, 1.4 times as long as wide, 2.6 times the length and 1.4 times the width of pronotum, widest at basal 3/7; dorsum rather strongly convex though gently but broadly flattened in middle; disc punctato-striate, the striae shallow, the punctures rather closely set; intervals gently convex, each with a row of minute punctures, each with a hair shorter and finer than that of striae puncture; 9th interval with 3 setiferous umbilicate pores, one at basal 1/6, another at apical 2/9, and the other at apical 1/7; apices weakly, roundly produced posteriad.

Each femur rather strongly thickened, profemur spined at apical 2/7 of upper side of anterior margin; ratios of the lengths of pro-, meso- and metatarsomeres: 0.46, 0.32, 0.24, 0.21, 1.2; 0.67, 0.36, 0.32, 0.31, 1.27; 1.2, 0.64, 0.29, 1.52.

Male genitalia rather slender, 1.35 mm in length, 0.3 mm in width, weakly curved in the middle of basal piece in lateral view; fused lateral lobes about 0.25 mm in length, somewhat spatulate and flattened, with apex very slightly produced.

Body length: ca. 6 mm.

Holotype: ♂, Jizu Shan, 2,260 m alt., Binchuan Xian, Yunnan Sheng, SW China, 25-X-1995, Y. WATANABE & N. XIAO leg. (SIA).

***Laena yufengsi* sp. nov.**

(Fig. 2)

Blackish brown, with antennae, legs, mouth parts, etc., more or less lighter in colour; head and pronotum weakly, somewhat sericeously shining and clothed with rather short bent hairs, elytra vitreously shining and clothed with bent hairs, which are longer than those on the former two portions, ventral surface gently shining, also clothed with fine and rather short bent hairs. Oblong-ovate and rather strongly convex, though gently flattened broadly in the median parts.

Head subquadrate, gently raised posteriad, closely and coarsely punctate, the punctures often fused with one another and forming rugosities; clypeus short and transverse, major portion bent downwards and gently truncate in front, fronto-clypeal sulcus fine and arcuate anteriorly; genae gently raised, with outer margins rounded; frons quadrate, longitudinally depressed on each side; eyes medium-sized, roundly convex laterad, gently inlaid into head, diameter about 5 times the diameter of an eye. Antennae reaching base of pronotum, ratio of the length of each segment from basal to apical: 0.33, 0.2, 0.29, 0.22, 0.24, 0.23, 0.22, 0.21, 0.21,

0.22, 0.31.

Pronotum subcordate, almost as wide as long, at base narrower than at apex, widest at apical $2/5$; apex slightly emarginate; base feebly produced posteriad; sides steeply inclined laterad, lateral ridges almost inconspicuous; front angles obtusely angulate, hind angles rounded; disc gently convex, feebly flattened, closely rugoso-punctate, weakly, longitudinally impressed medially, with an impression slightly before the middle on each side.

Elytra ovate, 1.5 times as long as wide, 2.35 times the length and 1.5 times the width of pronotum, widest at basal $2/5$; dorsum rather strongly convex, though broadly and weakly flattened in medial portion; disc punctato-striate, the striae shallow, the punctures on striae small at the bottoms, rather large at the upper edges, the punctures becoming foveate in lateral portion; intervals in inner portion almost feebly elevated, those in lateral portion gently ridged, each with a row of small punctures; 9th interval with three setiferous umbilicate pores, one at basal $2/9$, another at apical $1/5$, and the other at apical $1/10$; apices roundly, gently produced posteriad.

Legs rather stout; femora thickened, profemur obtusely angulate at apical $1/3$ of upper side on anterior margin, mesofemur obtusely angulate at apical $1/4$ of under side on posterior margin, metafemur obtusely angulate at apical $1/3$ of under side on posterior margin; protibia with inner margin feebly gouged in basal $1/3$, feebly thickened and haired in apical $2/3$; ratios of the lengths of pro-, meso- and metatarsomeres: 0.56, 0.38, 0.31, 0.26, 1.2; 0.8, 0.48, 0.41, 0.29, 1.23; 1.49, 0.74, 0.24, 1.68.

Male genitalia elongate, strongly curved in lateral view, 1.7 mm in length, 0.35 mm in width; fused lateral lobes small (0.65 mm in length), flattened and spatulate, with feebly produced apex.

Body length: ca. 6.5 mm.

Holotype: ♂, Yufengsi, 2,640 m, nr. Yulongxue Shan, Lijiang Naxizu Zishi Xian, Yunnan Sheng, 21-X-1995, Y. WATANABE & N. XIAO leg. (SIE).

Laena jizushana sp. nov.

(Fig. 3)

Dark reddish brown, with antennae, mouth parts, tibiae, tarsi, etc., lighter in colour; each surface feebly shining and rather densely clothed with short bent hairs. Oblong-ovate, convex above though gently flattened in the median parts.

Head subdecagonal, gently raised posteriad, coarsely rugoso-punctate; clypeus transversely hexagonal, gently bent and truncate in front, fronto-clypeal border finely sulcate; genae gently raised, subparallel-sided, with rounded corners; frons quadrate, longitudinally depressed on each side; eyes rather small, gently convex laterad, somewhat triangularly inlaid into head, diameter about 7 times the

width of an eye diameter. Antennae reaching base of pronotum, with large terminal segments, ratio of the length of each segment from basal to apical: 0.34, 0.2, 0.3, 0.25, 0.24, 0.27, 0.25, 0.25, 0.24, 0.26, 0.37.

Pronotum subovate, slightly longer than wide, widest at apical 1/3; apex straight; base rounded, feebly impressed medially; sides gently declined to rounded lateral margins, which are finely ridged and visible from above; front angles subrectangular, hind angles rounded; disc feebly convex, closely and coarsely rugoso-punctate.

Elytra ovate, 1.5 times as long as wide, 2.2 times the length and slightly less than 1.5 times the width of pronotum, widest at basal 3/8; dorsum rather strongly convex though broadly flattened medially; disc punctato-striate, each puncture rounded at bottom, somewhat transverse and notching intervals at upper edge; intervals gently convex, with two or three rows of punctures, which are often connected with one another, making the intervals seemingly wrinkled; 9th interval with 3 setiferous umbilicate pores, one at basal 1/5, another at apical 2/7, and the other at apical 1/7; apices narrowly rounded and produced downwards.

Legs stout; each femur with an angle on inner margin, in profemur at apical 1/3 of upper side, in mesofemur at apical 1/3 of under side, and in metafemur at apical 1/4 of under side; inner margin of protibia weakly thickened and haired in apical 3/5; ratios of the lengths of pro-, meso- and metatarsomeres: 0.63, 0.46, 0.29, 0.25, 1.2; 0.68, 0.52, 0.39, 0.26, 1.21; 1.5, 0.74, 0.43, 1.53.

Male genitalia somewhat elongated fusiform, 1.5 mm in length and 0.3 mm in width, rather strongly curved near base in lateral view; fused lateral lobes 0.25 mm in length, flattened and spatulate, with apex weakly produced.

Body length: ca. 6.5 mm.

Holotype: ♂, Jizu Shan, 2,650 m, Binchuan Xian, Yennan Sheng, 25-X-1995, Y. WATANABE leg. (SIE). Paratype: 1 ex., Jizushan Mts., 2,500–3,100 m alt., 30-V~3-VI-1993, Vit KUBÁŇ leg. (BC).

Laena angulifemoralis sp. nov.

(Fig. 4)

Brownish black, with antennae, tibiae, abdominal sternites, etc., lighter in colour, mouth parts and tarsi pale yellowish brown; dorsal surface gently, vitreously shining, ventral surface feebly and somewhat alutaceously shining; each surface clothed with rather long, somewhat erect hairs. Oblong-ovate, gently convex above though feebly flattened in the median parts.

Head slightly widened apicad, only feebly convex above medially, coarsely punctate and often rugose; clypeus transversely hexagonal and short, weakly bent and feebly emarginate in front, each side of the emargination obtusely angulate; genae rather strongly raised, impunctate, feebly and obtusely produced laterad;

frons subquadrate, longitudinally depressed on each side; eyes medium-sized, strongly convex laterad, roundly inlaid into head, with diatone slightly less than 5 times the width of an eye diameter. Antennae reaching base of pronotum, ratio of the length of each segment from basal to apical: 0.39, 0.2, 0.3, 0.25, 0.3, 0.28, 0.29, 0.26, 0.28, 0.28, 0.39.

Pronotum subcordate, slightly wider than long, widest at apical $2/5$; apex and base almost straight, the former wider than the latter; sides gently declined to rounded lateral margins, which are sharply ridged laterad and visible from above; front and hind angles obtusely angulate; disc gently convex, sparsely scattered with punctures, which become closer and coarser laterad.

Elytra oblong-ovate, 1.7 times as long as wide, 3.3 times the length and 1.3 times the width of pronotum, widest at basal $3/8$; dorsum gently convex though broadly flattened medially; disc with rows of punctures, which are evenly set; intervals slightly elevated, each with a row of smaller punctures, which are sparsely and irregularly set; 3rd interval with a setiferous umbilicate pore slightly behind apical $1/8$, 7th with one at basal $1/11$, 9th with 3, one at basal $1/5$, another at apical $1/4$, the other at apical $1/8$; apices gently and roundly produced narrowly posteriad.

Femora thickened, each with a distinct angle on inner margin, in profemur at apical $1/3$ of upper side, in mesofemur at apical $1/4$ of under side, in metafemur at apical $1/5$ of under side; ratios of the lengths of pro-, meso- and metatarsomeres: 0.63, 0.37, 0.34, 0.28, 1.2; 0.7, 0.6, 0.4, 0.28, 1.12; 1.3, 0.7, 0.3, 1.41.

Male genitalia slender, 2.25 mm in length and 0.38 mm in width; basal piece elongate (1.75 mm in length), with a small hook at apex of each lateral margin; fused lateral lobes 0.5 mm in length, flattened and spatulate, with apex feebly produced.

Body length: 6.6–7.5 mm.

Holotype: ♂, Jizu Shan, 2,650 m alt., Binchuan Xian, Yunnan Sheng, 25-X-1995, S. UENO leg. (SIE). Paratype: 1 ex., Jizu Shan, 2,650 m alt., 25-X-1995, Y. WATANABE leg. (NSMT).

Notes. The present new species somewhat resembles *Laena chinensis* KASZAB, 1965, from Tali (Yunnan, Tali, Xicang Shan, 3,000–3,900 m alt.), but can be distinguished from the latter by the head more strongly widened apicad and more coarsely punctate, the eyes more distinctly convex laterad, the pronotum smoother and sparsely scattered with larger punctures, the elytra not striate but with rows of punctures, which are more sparsely set, and the intervals only slightly convex, each with a row of larger punctures.

In both *L. angulifemoralis* and *L. chinensis*, each elytron possesses several setiferous umbilicate pores and each femur is armed with an angle on the inner margin. In his original description of the latter, KASZAB did not describe the arrangement of pores in detail, and incorrectly mentioned about the position of

femoral angles. Therefore, the author is going to give an additional account as follows: in *L. chinensis*, elytra with one setiferous umbilicate pore at apical 1/8 on 3rd interval, one at basal 1/23 on 7th, and 3 on 9th, one at basal 2/11, another at apical 1/5 and the other at apical 1/10. Each femur with an angle on inner margin, in profemur at apical 1/4 of upper side, in mesofemur at apical 1/4 of under side, and in metafemur at apical 1/5 of under side.

Laena youcida sp. nov.

(Fig. 5)

Brownish black, with antennae, tibiae, tarsi, etc., brown; dorsal surface gently, somewhat vitreously shining, ventral surfaces of head and prothorax alutaceously shining and abdominal sternites feebly, vitreously so; each surface clothed with short bent hairs. Oblong-ovate, gently convex above, though weakly flattened in the median parts.

Head subhexagonal, weakly raised medially, very slightly micro-shagreened, rugoso-punctate; clypeus transversely hexagonal, gently inclined forwards, with apex feebly emarginate, rounded on each side; genae gently raised, roundly produced laterad; frons quadrate, gradually declined to finely sulcate fronto-clypeal border, rather strongly depressed on each side; eyes rather large, gently convex laterad, roundly inlaid into head, diatone about 4 times the width of an eye diameter. Antennae rather slender, reaching base of elytra, ratio of the length of each segment from basal to apical: 0.55, 0.2, 0.39, 0.35, 0.33, 0.33, 0.31, 0.29, 0.28, 0.33, 0.5.

Pronotum subcordate, 1.2 times as wide as long, widest at apical 2/5, wider at apex than at base; apex nearly straight; base very slightly produced; sides gently declined to lateral margins, which are distinctly roundly produced and clearly ridged; front angles obtuse, hind angles rounded; disc weakly micro-shagreened, gently convex and slightly flattened posteriad, rather closely punctate, the punctures becoming closer and coarser in lateral portions, longitudinally, shallowly impressed medially, with an impression at the middle on each side.

Elytra ovate, 1.63 times as long as wide, 2.42 times the length and 1.33 times the width of pronotum, widest at basal 3/8; dorsum rather strongly convex though feebly flattened anteriad and posteriad, highest at basal 2/5; disc punctato-striate, the striae shallow, each puncture in stria small but deep at bottom, large at top; intervals gently convex and very weakly micro-shagreened, each with a row of sparse and fine punctures, 7th interval rather ridged, with a setiferous umbilicate pore at basal 1/11, 9th with 3, one at basal 2/9, another at apical 1/4, and the other at apical 1/8; apices narrowly roundly produced posteriad.

Legs stout; each femur with an angle on inner margin, in profemur at apical 1/3 of upper side, in mesofemur at apical 1/3 of under side, and in metafemur at

apical 1/4 of under side; ratios of the lengths of pro-, meso- and metatarsomeres: 0.6, 0.4, 0.35, 0.25, 1.2; 0.7, 0.5, 0.3, —, —; 1.2, 0.8, 0.4, 1.65.

Male genitalia slender, slightly curved in lateral view, 1.35 mm in length, 0.2 mm in width; fused lateral lobes 0.35 mm in length, gently, longitudinally raised medially, with rather acute apex.

Body length: ca. 6.5 mm.

Holotype: ♂, Jizu Shan, 2,550 m alt., Binchuan Xian, Yunnan Sheng, 25-X-1995, Y. WATANABE & N. XIAO leg. (SIE). Paratype: 1 ex., same data as for the holotype (NSMT).

Laena xuerenensis sp. nov.

(Fig. 6)

Blackish brown, with femora darker in colour, hairs on surface yellowish brown; dorsal surface somewhat sericeously shining, ventral surface and femora gently, vitreously shining; each surface sparsely clothed with short fine hairs. Rather large and elongate, gently convex above, though feebly flattened in the median parts.

Head almost quadrate, feebly convex posteriad, slightly micro-shagreened, rather closely and coarsely punctate; clypeus transversely hexagonal, gently bent downwards in apical half, distinguished from frons and genae by a fine sulcus; genae roundly raised, triangularly produced laterad; frons gently and longitudinally convex, grooved on each side; eyes convex laterad, gently inlaid into head, with diatone about 7 times the width of an eye diameter. Antennae reaching base of pronotum, ratio of the length of each segment from basal to apical: 0.32, 0.22, 0.36, 0.3, 0.29, 0.29, 0.28, 0.27, 0.27, 0.26, 0.36.

Pronotum quadrate, about 1.2 times as wide as long, widest at the middle, wider at apex than at base; apex slightly emarginate; base rounded; sides gently declined to rounded lateral margins, which are finely ridged; front angles obtusely angulate, hind angles rounded in dorsal view; disc gently convex above though feebly flattened, slightly micro-shagreened, scattered with small punctures, which become closer and coarser in lateral portions, shallowly longitudinally grooved in anterior half, weakly impressed slightly before the middle on each side, and shallowly, triangularly depressed at base.

Elytra ovate, 1.7 times as long as wide, 2.5 times the length and 1.3 times the width of pronotum, widest at basal 2/5; dorsum gently convex though widely, feebly flattened medially; disc micro-shagreened, punctato-striate, the striae very shallow and the punctures in the striae small; intervals gently elevated, each with a row of punctures, which are very small and sparse; 7th interval a little distinctly raised; 9th interval with 3 setiferous umbilicate pores, one at basal 2/9, another at apical 1/5, and the other at apical 1/10; apices roundly produced apicad.

Femur without angle or spine; each tibia feebly thickened apicad, though very slightly gouged before apex on inner margin; ratios of the lengths of pro-, meso- and metatarsomeres: 0.6, 0.4, 0.4, 0.32, 1.2; 0.68, 0.58, 0.42, 0.36, 1.24; 1.5, 0.8, 0.57, 1.53.

Male genitalia elongated fusiform, 3.2 mm in length and 0.6 mm in width; basal piece curved before the middle in lateral view, with apical portion narrowed and hooked on each side; fused lateral lobes 0.5 mm in length, rather spatulate, with feebly produced apex.

Body length: 10.3 mm.

Holotype: ♂, Xueren Feng, 3,120 m alt., Diancang Shan Mts., Dali, Yunnan Sheng, 27-X-1995, S. UENO leg. (SIE).

Laena tumidoculata sp. nov.

(Fig. 7)

Brownish black, with antennae, mouth parts, abdominal sternites, tibiae, tarsi, etc., brown to yellowish brown (the coloration of the holotype is light due to immaturity); dorsal surface strongly and vitreously shining, ventral surface gently so; each surface clothed with rather long, pale yellowish hairs. Oblong-ovate, gently convex above though weakly flattened in the median parts.

Head subdecagonal, weakly convex posteriad, rather closely and coarsely punctate; clypeus transversely hexagonal, gently inclined forwards, with slightly emarginate apex; genae weakly raised, impunctate before eyes, with obtuse outer margin; frons feebly declined to straight and short fronto-clypeal sulcus, obliquely depressed along fronto-clypeal borders; eyes medium-sized, rather noticeably protrudent laterad, gently inlaid into head, diameter about 6 times the width of an eye diameter. Antennae reaching base of elytra, with large terminal segments, ratio of the length of each one from basal to apical: 0.32, 0.2, 0.29, 0.24, 0.23, 0.25, 0.25, 0.24, 0.23, 0.24, 0.37.

Pronotum subcordate, slightly wider than long, widest a little before the middle, wider at apex than at base; apex slightly emarginate; base very feebly produced posteriad; sides gently declined to moderately rounded lateral margins, which are finely rimmed; front angles obtuse, hind angles rounded; disc gently convex, rather coarsely punctate.

Elytra ovate, 1.5 times as long as wide, 2.2 times the length and 1.4 times the width of pronotum, widest at basal 2/5; dorsum gently convex though weakly flattened in middle; disc with rows of punctures; intervals almost flat, sparsely punctate, the sizes of punctures almost the same or slightly smaller than those in rows; 7th interval with a setiferous umbilicate pore at basal 1/17; 9th with 3, one at basal 1/6, another at apical 1/5, and the other at apical 1/7 (an additional pore present just behind the latter on the right elytron of the holotype, though it seems

aberrant).

Legs rather stout; each femur thickened in middle; ratios of the lengths of pro-, meso- and metatarsomeres: 0.55, 0.35, 0.3, 0.2, 1.2; 0.7, 0.45, 0.35, 0.2, 1.25; 1.05, 0.75, 0.25, 1.45.

Male genitalia slender, 1.15 mm in length and 0.25 mm in width; fused lateral lobes 0.3 mm in length, flattened and somewhat spatulate, with rounded apex.

Body length: ca. 4.6 mm.

Holotype: ♂, Jizu Shan, 2,130 m alt., Binchuan Xian, Yunnan Sheng, 25-X-1995, Y. WATANABE & N. XIAO leg. (SIE). Paratype: 1 ex., same data as for the holotype (NSMT).

Key to the *Laena* Species from Yunnan

- 1(12) Femora thickened and obviously angulate or spined.
- 2(3) Only profemur with inner margin spined; ca. 6 mm; Jizu Shan
. *L. yasukii* sp. nov.
- 3(2) Each femur with inner margin angulate or spined.
- 4(7) Only 9th elytral interval with setiferous umbilicate pores.
- 5(6) Diatone about 5 times the width of an eye diameter; lateral ridges of pronotum inconspicuous; elytral interval with a row of small punctures; ca. 6.5 mm; Yufengsi, nr. Yulongxue Shan *L. yufengsi* sp. nov.
- 6(5) Diatone about 7 times the diameter of an eye; lateral ridges of pronotum visible from above; elytral interval with 2 or 3 rows of small punctures; ca. 6.5 mm; Jizu Shan *L. jizushana* sp. nov.
- 7(4) Third, 7th and 9th elytral intervals, or 7th and 9th with setiferous umbilicate pores.
- 8(9) Seventh and 9th elytral intervals with setiferous umbilicate pores; ca. 6.5 mm; Jizu Shan *L. youcida* sp. nov.
- 9(8) Third, 7th and 9th elytral intervals with setiferous umbilicate pores.
- 10(11) Eyes more strongly convex laterad; pronotum smoother and more sparsely scattered with larger punctures; elytra with rows of punctures; intervals only slightly elevated; 6.6–7.5 mm; Jizu Shan
. *L. angulifemoralis* sp. nov.
- 11(10) Eyes moderately convex laterad; pronotum feebly micro-shagreened, rather closely punctate, the punctures smaller; elytra punctato-striate; intervals gently convex; 7–9 mm; Dali. *L. chinensis* KASZAB.
- 12(1) Femora not angulate or spined but only thickened.
- 13(14) Body larger (above 10 mm); 9th elytral interval with setiferous umbilicate pores; 10.3 mm; Xueren Feng, Diancang Shan Mts.
. *L. xuerenensis* sp. nov.
- 14(13) Body smaller (4–7 mm); 3rd and 9th, 7th and 9th, or 3rd, 7th and 9th

- elytral intervals with setiferous umbilicate pores.
- 15(16) Third and 9th elytral intervals with setiferous umbilicate pores; 5.5–5.7 mm; Yuzhu Feng, Diancang Shan Mts.
*L. yuzhuensis* MASUMOTO et YIN.
- 16(15) Seventh and 9th elytral intervals, or 3rd, 7th and 9th with setiferous umbilicate pores.
- 17(20) Seventh and 9th elytral intervals with setiferous umbilicate pores.
- 18(19) Eyes rather noticeably convex laterad, diatone about 6 times the width of an eye diameter; body moderately clothed with rather long hairs; ca. 4.6 mm; Jizu Shan.*L. tumidoculata* sp. nov.
- 19(18) Eyes gently convex laterad, diatone about 7 times the width of an eye diameter; body distinctly covered with rather long hairs; 5.1–6.3 mm; Yu'an Shan, Kunming*L. watanabei* MASUMOTO et YIN.
- 20(17) Third, 7th and 9th elytral intervals with setiferous umbilicate pores.
- 21(22) Eyes more strongly convex laterad; body piceous; pronotum more strongly convex above; 4.4–4.6 mm; Laohu Shan, Dali Shi.
*L. daliensis* MASUMOTO et YIN.
- 22(21) Eyes less convex laterad; body lighter in colour; pronotum less strongly convex above.
- 23(24) Head and pronotum wider; male genitalia with fused lateral lobes ridged medially; 4.2–4.6 mm; Zhonghe Feng, Diancang Shan Mts.
*L. yunnanensis* MASUMOTO et YIN.
- 24(23) Head and pronotum narrower; male genitalia with fused lateral lobes simply spatulate; 4.0–4.5 mm; Yuzhu Feng, Diancang Shan Mts.
*L. xiaoi* MASUMOTO et YIN.

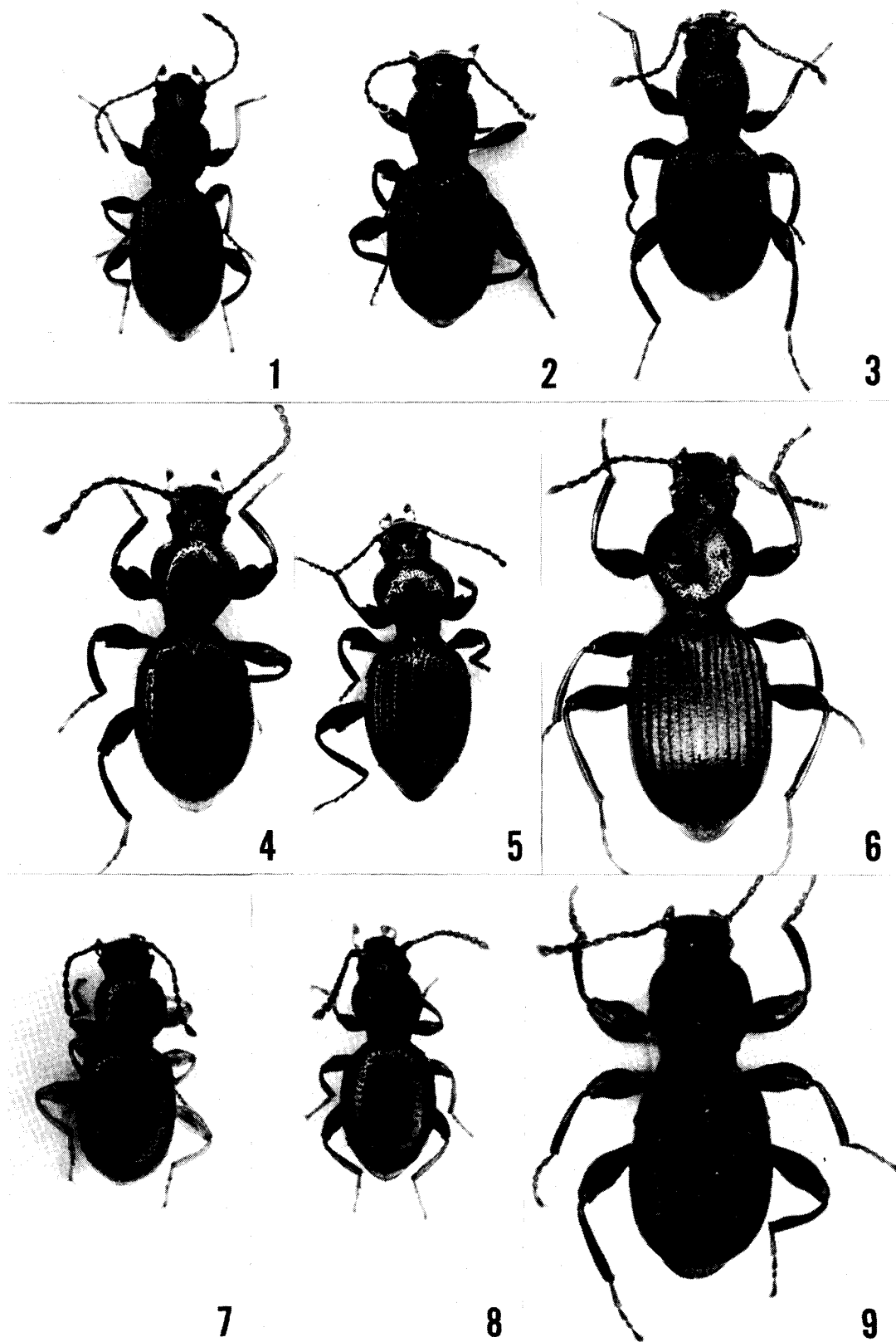
II. Sichuanese Species

Laena emeishana sp. nov.

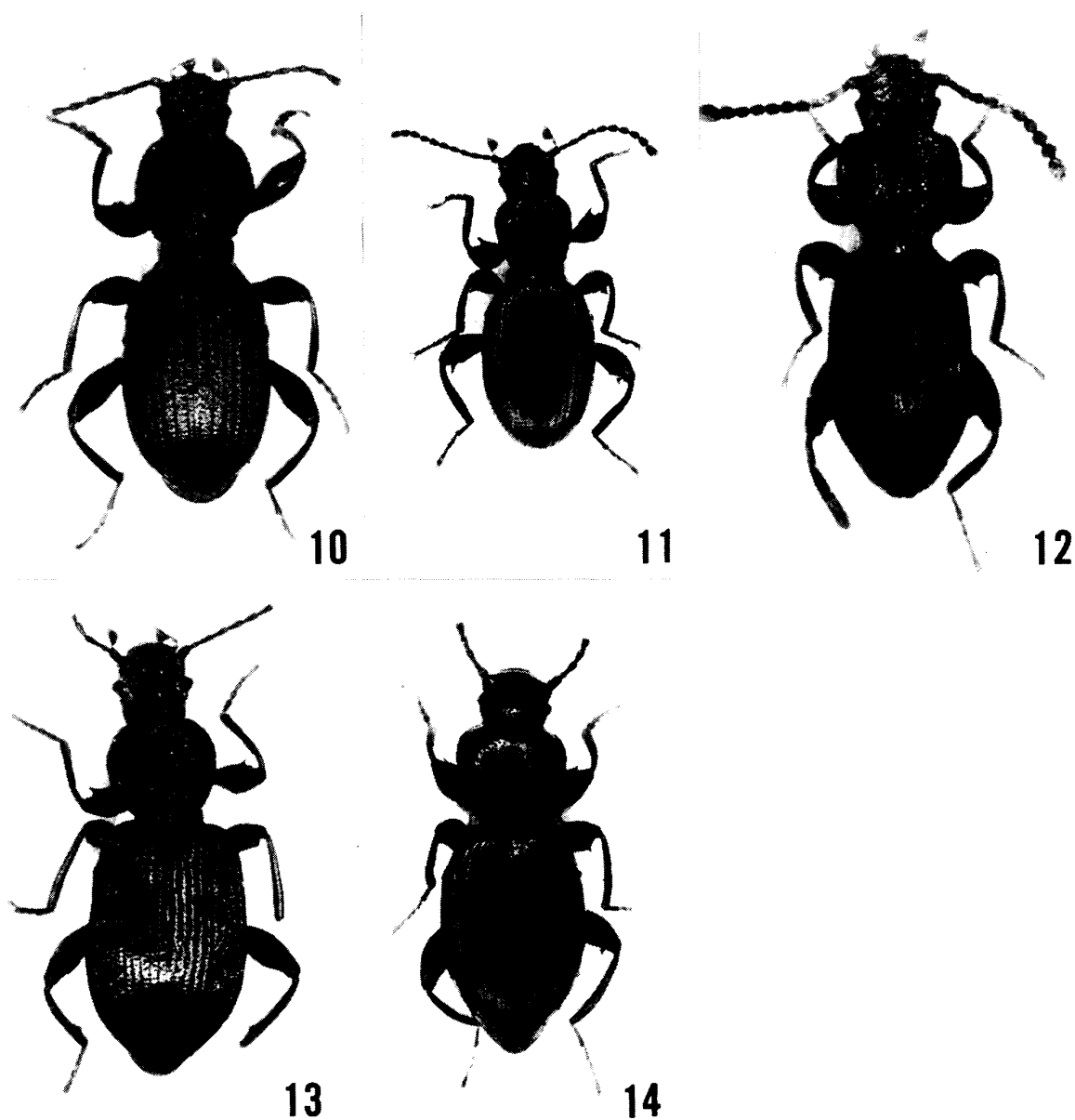
(Fig. 8)

Dark brown, with antennae, femora and tibiae lighter in colour, mouth parts and tarsi yellowish brown, eyes black; head, pronotum, legs and ventral surface weakly shining, elytra rather strongly and vitreously shining; each surface clothed with fine bent hairs. Oblong-ovate, rather strongly convex above.

Head subdecagonal, feebly raised posteriad, scattered with punctures; clypeus transversely hexagonal, weakly projected and bent downwards in apical portion, distinguished from frons and genae by a fine sulcus; genae gently raised, almost impunctate, with outer margins rather distinctly obliquely projected; frons rather wide, very weakly convex medially; eyes medium-sized, gently rounded laterad, weakly inlaid into head, diatone about 5 times the width of an eye diameter. Antennae reaching base of elytra, ratio of the length of each segment



Figs. 1-9



Figs. 10-14

Figs. 1-9 (on p. 176). Habitus of *Laena* spp. — 1, *L. yasukii* sp. nov., holotype ♂; 2, *L. yufengsi* sp. nov., holotype ♂; 3, *L. jizushana* sp. nov., holotype ♂; 4, *L. angulifemoralis* sp. nov., holotype ♂; 5, *L. youcida* sp. nov., holotype ♂; 6, *L. xuerenensis* sp. nov., holotype ♂; 7, *L. tumidoculata* sp. nov., holotype ♂; 8, *L. emeishana* sp. nov., holotype ♂; 9, *L. shaanxiica* sp. nov., holotype ♂.

Figs. 10-14 (on p. 177). Habitus of *Laena* spp. — 10, *L. imurai* sp. nov., holotype ♂; 11, *L. fengileana* sp. nov., holotype ♂; 12, *L. tamdaoensis* sp. nov., holotype ♂; 13, *L. fangensis* sp. nov., holotype ♂; 14, *L. angkhangensis* sp. nov., holotype ♂.

from basal to apical: 0.45, 0.2, 0.3, 0.2, 0.2, 0.2, 0.24, 0.23, 0.25, 0.28, 0.33.

Pronotum subcordate, 1.25 times as wide as long, widest at apical 2/5, wider at apex than at base; apex almost straight; base very slightly produced posteriad and rimmed; sides steeply inclined laterad, not ridged; front angles obtusely angulate, hind angles widely rounded; disc feebly convex, scattered with punctures.

Elytra ovate, 1.56 times as long as wide, 2.5 times the length and 1.5 times the width of pronotum, widest at basal 2/5; dorsum rather strongly convex, highest at basal 1/3, sutural portion slightly ridged; disc with rows of punctures, 1st row slightly grooved, the punctures not so large but clear; intervals mostly flat, impunctate and smooth; 3rd interval with a setiferous umbilicate pore at apical 1/8, 7th with one at basal 1/17, 9th with 3, one at the inner base of rather noticeable swelling projected postero-laterad at basal 1/5, another at apical 5/16, and the other at apical 1/6; apices gently, roundly produced apicad.

Legs stout and unmodified; ratios of the lengths of pro-, meso- and metatarsomeres: 0.4, 0.25, 0.25, 0.2, 0.7; 0.45, 0.33, 0.27, 0.22, 0.77; 0.8, 0.32, 0.26, 1.0.

Male genitalia elongated fusiform, 1.1 mm in length and 0.2 mm in width, gently curved in basal 1/3 in lateral view; fused lateral lobes 0.2 mm in length, flattened and spatulate, with rounded apex.

Body length: 3.5–4.3 mm.

Holotype: ♂, Leidong Ping, 2,365 m alt., Mt. Emei Shan, Sichuan Sheng, 3–XI–1995, S. UÉNO leg. (NSMT). Paratypes: 3 exs., same data as for the holotype; 1 ex., Leidong Ping, 2,510 m alt., 1–XI–1995, S. UÉNO leg.; 1 ex., Baiyunsu, Emei Shan, 2,450 m alt., 2–XI–1995, S. UÉNO leg.

Notes. This new species represents the first record of the genus from Sichuan Sheng, Southwest China.

III. Shaanxian Species

Laena shaanxiica sp. nov.

(Fig. 9)

Brownish black with antennae and elytra lighter in colour, apices of terminal segments of antennae, mouth parts and tarsi yellowish brown; each surface feebly and somewhat alutaceously shining and rather densely clothed with short bent hairs. Rather elongate, strongly convex above though gently flattened in the median parts.

Head quadrate, gently inclined apicad, weakly micro-shagreened, closely punctate, the punctures often rugose; clypeus transverse hexagonal, weakly bent downwards in apical half, with apex feebly emarginate and angulate on each side; genae gently, somewhat longitudinally raised, with outer margins rounded; frons rather wide, longitudinally depressed on each side along borders of genae, gently

arcuately sulcate along fronto-clypeal border; eyes medium-sized, roundly convex laterad, gently inlaid into head, diatone about 7 times the width of an eye diameter. Antennae reaching base of pronotum, ratio of the length of each segment from basal to apical: 0.35, 0.2, 0.33, 0.27, 0.26, 0.27, 0.25, 0.24, 0.25, 0.28, 0.47.

Pronotum subcordate, slightly longer than wide, widest at apical $1/3$; apex very slightly emarginate; base almost straight and weakly bordered, as wide as apex; sides steeply inclined laterad, lateral ridges not clear; front angles obtusely angulate, hind angles rounded; disc gently convex, longitudinally impressed medially, and also impressed on each side slightly before the middle, micro-shagreened and closely punctate, the punctures often fused with one another.

Elytra ovate, 1.5 times as long as wide, 2.2 times the length and 1.47 times the width of pronotum, widest at the middle; dorsum rather strongly convex, though feebly flattened broadly in middle; disc punctato-striate, the striae gently grooved, the punctures on striae rather small but deep; intervals in inner portion feebly elevated, those in lateral portion rather ridged (7th and 8th distinctly so), micro-shagreened, asperate due to finely granulate punctures, which are united with one another by fine rugosities; 9th interval with 3 setiferous umbilicate pores, one at basal $1/4$, another at apical $2/9$, and the other at apical $1/9$; apices roundly produced apicad.

Legs stout; each tibia with a hook at inner side of apex; protarsi with each segment rather distinctly dilated apicad; ratios of the lengths of pro-, meso- and metatarsomeres: 0.65, 0.55, 0.4, 0.35, 1.2; 0.65, 0.55, 0.4, 0.33, 1.24; 1.22, 0.75, 0.48, 1.53.

Male genitalia elongated fusiform, 2.2 mm in length and 0.6 mm in width, strongly curved near base in lateral view; fused lateral lobes 0.4 mm in length, rather strongly raised medially, with rounded apices.

Body length: 8.4 mm.

Holotype: ♂, nr. headwaters of Riv. Laoyu-He, 2,000 m alt., SW of Hu Xian, Shaanxi Sheng, Central China, 11-V-1993, Y. IMURA leg. (NSMT). Paratype: 1 ex., nr. headwater of Riv. Feng-He, 1,900 m alt., SW of Chang'an Xian, Shaanxi Sheng, Central China, 9-V-1993, Y. IMURA leg.

Laena imurai sp. nov.

(Fig. 10)

Piceous, with antennae, elytra, tibiae, etc., dark reddish brown, tarsi and mouth parts yellowish brown; dorsal surface feebly, somewhat sericeously shining, ventral surfaces of head and prothorax rather mat, abdominal sternites gently and vitreously shining; dorsal surface rather sparsely clothed with fine hairs. Rather elongate, gently convex above, though feebly flattened in the median parts.

Head subquadrate, weakly depressed broadly in middle, slightly micro-shagreened and rugoso-punctate; clypeus short hexagonal, gently declined to apex, which is feebly emarginate; genae subparallel-sided and rather distinctly raised; frons quadrate, feebly raised medially; eyes roundly convex laterad and somewhat triangularly inlaid into head, diameter about 6 times the width of an eye diameter. Antennae somewhat filiform in basal 7 segments, thickened and flattened in apical four, ratio of the length of each segment from basal to apical: 0.37, 0.24, 0.48, 0.36, 0.31, 0.30, 0.30, 0.30, 0.28, 0.26, 0.35.

Pronotum as wide as long, widest a little before the middle; apex very slightly emarginate; base feebly arcuate posteriad, almost of the same width as apex; sides rather steeply inclined laterad, lateral ridges unclear; front and hind angles obtuse; disc gently convex, closely and coarsely punctate, the punctures often fused with one another and rugose in lateral portions, with a shallow, longitudinal impression medially, also with a pair of vague impressions at the middle.

Elytra slightly elongated ovate, 1.5 times as long as wide, a little more than 2.3 times the length and 1.3 times the width of pronotum, widest at the middle; dorsum gently convex, highest a little before the middle; disc micro-shagreened, punctato-striate, the striae rather wide but shallow, each puncture in striae small, rounded and deep at the bottom, large and irregularly shaped at the surface of interval; intervals gently convex, micro-shagreened, scattered with fine punctures, finely rugose, 7th to 9th intervals gently ridged, 9th with 3 setiferous umbilicate pores, one at basal $2/7$, another at apical $1/5$, and the other at apical $1/7$; apex roundly produced posteriad.

Each tibia with finely hooked inner apex; protarsi with each segment rather distinctly dilated; ratios of the lengths of pro-, meso- and metatarsomeres: 0.53, 0.46, 0.39, 0.24, 1.14; 0.68, 0.53, 0.32, 0.26, 0.98; 1.15, 0.69, 0.37, 1.23.

Male genitalia gently elongated fusiform, 2.7 mm in length and 0.5 mm in width, roundly curved at basal $1/4$ in lateral view; basal piece with a notch at apex on each side; fused lateral lobes 0.5 mm in length, spatulate, with slightly produced apex.

Body length: 9.2 mm.

Holotype: ♂, Pass between Banfangzi and Xindianer, 2,000 m alt., Zhouzhi Xian, Shaanxi Sheng, Central China, 21~23-V-1993, Y. IMURA, FAN & S. KOIWAYA leg.

Laena fengileana sp. nov.

(Fig. 11)

Dark reddish brown, with tarsi and mouth parts yellowish brown; dorsal surface gently and somewhat vitreously shining, ventral surface feebly and somewhat alutaceously so; each surface clothed with rather short bent hairs.

Oblong-ovate, gently convex above, though feebly flattened in the median parts.

Head subdecagonal, feebly raised posteriad, rather closely and coarsely punctate, the punctures often fused with one another and forming rugosities; clypeus transversely hexagonal, gently inclined apicad, the apex feebly emarginate with each side rounded, finely sulcate along fronto-clypeal and clypeo-genal borders; genae before eyes gently raised and almost impunctate, roundly produced laterad; frons quadrate, inclined forwards, longitudinally depressed on each side; eyes medium-sized, roundly convex laterad, weakly inlaid into head, diameter about 7 times the width of an eye diameter. Antennae reaching base of elytra, ratio of the length of each segment from basal to apical: 0.38, 0.2, 0.29, 0.23, 0.22, 0.22, 0.22, 0.21, 0.22, 0.26, 0.36.

Pronotum subcordate, almost as wide as long, widest at apical 1/4, wider at apex than at base; apex and base straight; sides rather steeply inclined laterad, lateral ridges not clear; front angles obtuse, hind angles rounded; disc gently convex though very slightly flattened posteriad, strongly punctate, the punctures becoming closer and coarser laterad.

Elytra slightly elongated ovate, 1.6 times as long as wide, 2.3 times the length and 1.5 times the width of pronotum, widest slightly before the middle; dorsum gently convex though weakly flattened broadly in middle; disc with rows of small but clear punctures, the rows in inner portion shallowly grooved; intervals feebly convex, scattered with minute punctures, 9th intervals with 3 setiferous umbilicate pores, one at basal 3/14, another at apical 1/5, and the other at apical 1/11; apices weakly, roundly produced postero-ventrad.

Each femur thickened and with an acute spine on inner margin, in profemur at apical 1/4 of upper side, in mesofemur at apical 1/4 of under side, in metafemur at apical 1/6 of under side; ratios of the lengths of pro-, meso- and metatarsomeres: 0.58, 0.31, 0.26, 0.22, 1.2; 0.6, 0.52, 0.31, 0.14, 1.14; 1.3, 0.7, 0.46, 1.6.

Male genitalia rather robust, ca. 1.5 mm in length, 0.37 mm in width, strongly curved behind the middle in lateral view; fused lateral lobes 0.25 mm in length, spatulate and flattened, with apex slightly, roundly projected.

Body length: ca. 5.7 mm.

Holotype: ♂, nr. headwaters of Riv. Feng-ile, 1,900 m alt., SW Chang'an Xian, Shaanxi Sheng, Central China, 9-V-1993, Y. IMURA leg. (NSMT).

Key to the *Laena* Species from Shaanxi

- 1(2) Each tibia with a sharp spine on inner margin; ca. 5.7 mm; headwaters of Riv. Feng-ile *L. fengileana* sp. nov.
- 2(1) Each tibia without spine on inner margin.
- 3(4) Body slenderer; antennae longer; head more distinctly depressed medially; pronotum closely and coarsely punctate; elytra less distinctly haired, with

- stronger strial punctures; 9.2 mm; pass between Banfangzi and Xiandianer
*L. imurai* sp. nov.
- 4(3) Body robust; antennae shorter; head less distinctly depressed medially;
 pronotum rugoso-punctate; elytra more distinctly haired, with weaker strial
 punctures; 8.4 mm; near headwaters of Riv. Laoyu-He
*L. shaanxiica* sp. nov.

IV. Northern Vietnamese Species

Laena tamdaoensis sp. nov.

(Fig. 12.)

Piceous, with antennae, genae before eyes, elytra, femora, tibiae, ventral side of head, metasternum and abdominal sternites lighter in colour, mouth part and tarsi yellowish brown; head and pronotum almost mat, elytra, major portions of ventral surface and legs feebly, somewhat sericeously shining; each surface gently clothed with pale yellowish hairs, which are obliquely erect. Rather elongate, gently convex above though feebly flattened.

Head subdecagonal, rather flattened, feebly micro-shagreened, closely and coarsely rugoso-punctate; clypeus transversely hexagonal, feebly declined to apex, which is gently emarginate and whose sides are obtusely angulate; genae raised, triangularly impunctate, roundly produced laterad; frons flattened, fronto-clypeal border finely sulcate; eyes rather small, roundly convex laterad and gently inlaid into head, with diatone about 8 times the width of an eye diameter. Antennae hardly reaching base of pronotum, with rather large terminal segment, ratio of the length of each segment from basal to apical: 0.38, 0.2, 0.36, 0.32, 0.3, 0.3, 0.3, 0.3, 0.32, 0.34, 0.53.

Pronotum subcordate, slightly wider than long, widest at apical $1/3$; apex and base sublinear, obviously narrower at base than at apex; sides gently declined to rounded lateral margins, which are clearly ridged and finely crenulate; front angles obtuse, hind angles rounded; disc feebly convex, flattened medially, weakly micro-shagreened and rather closely scattered with punctures, which become closer in lateral portions.

Elytra elongated ovate, slightly less than twice as long as wide, 2.4 times the length and 1.3 times the width of pronotum, widest slightly before the middle; dorsum gently convex, feebly flattened broadly in middle; disc gently micro-shagreened and punctato-striate, the striae rather shallow and wide, the punctures in striae slightly transverse; intervals in inner portion gently convex, those in lateral portion ridged, each with a row of small punctures, those in lateral portion being so granulate that the intervals are finely serrate, 5th to 7th, and 9th intervals distinctly carinulate; 3rd interval with a setiferous umbilicate pore at apical $2/15$, 7th with one at basal $3/19$; 9th with 10, 1st at basal $1/8$, 2nd at basal $1/6$, 3rd at

basal 2/7, 4th at the middle, 5th at apical 7/20, 6th at apical 4/19, 7th at apical 1/5, 8th at apical 3/20, 9th at apical 3/19, and 10th at apical 1/13; apices feebly produced posteriad.

Legs rather robust; each femur with a sharp spine on inner margin, in profemur at apical 3/10 of upper side, in mesofemur at apical 1/4 of under side, in metafemur at apical 1/5 of under side; ratios of the lengths of pro-, meso- and metatarsomeres: 0.44, 0.31, 0.26, 0.22, 1.2; 0.68, 0.47, 0.33, 0.22, 1.23; 1.21, 0.66, 0.24, 1.31.

Male genitalia slender and gently bent in lateral view, 2.2 mm in length and 0.34 mm in width; fused lateral lobes 0.35 mm in length, somewhat spatulate, with rounded apex.

Body length: ca. 8.4 mm.

Holotype: ♂, Tam Dao, northern Vietnam, 5-VII-1990, M. ITO leg. (NSMT).

Key to the *Laena* Species from Northern Vietnam

- 1(4) Body stout; elytra short ovate; dorsal surface almost glabrous.
- 2(3) Elytra with setiferous umbilicate pores, 1 on 3rd interval, 3 on 9th; 7.2 mm; Mt. Phang Si Pang*L. acco* MASUMOTO.
- 3(2) Elytra with a small 'Höcker' in anterior portion of 9th interval; 7.5 mm; Chapa (=Sa Pa).*L. tonkinensis* SCHUSTER*.
- 4(1) Body rather slender; elytra oblong-ovate; dorsal surface more or less haired.
- 5(6) Each femur with a sharp spine; ca. 8.4 mm; Tam Dao*L. tamdaoensis* sp. nov.
- 6(5) Each femur without a spine.
- 7(8) Elytra with setiferous umbilicate pores, 1 on 3rd interval, 1 on 6th, and 4 on 8th; ca. 4.8 mm; Mt. Phang Si Pang .*L. hoanglienensis* MASUMOTO.
- 8(7) Elytra without setiferous umbilicate pores on even intervals, only on odd ones.
- 9(10) Elytra with setiferous umbilicate pores, 2 on 7th interval and 7 on 9th; 3.4–4.1 mm; Tam Dao*L. vietnamica* MASUMOTO.
- 10(9) Elytra with setiferous umbilicate pores not only on 7th and 9th intervals but also on 3rd.
- 11(12) Body smaller (4.3 mm), distinctly clothed with rather long hairs; elytra

*The author had an opportunity of examining the holotype of this species preserved in the Natural History Museum, London. Each elytron of the specimens actually possesses 6 setiferous umbilicate pores: 1 at apical 1/5 of 3rd interval, 1 at basal 1/8 of 7th, 1 at basal 1/4 of 8th, and 3 on 9th, one at basal 1/5, another at apical 1/3, and the other at apical 1/5.

- with setiferous umbilicate pores, 2 on 3rd interval, 1 on 7th, and 10 on 9th; Mt. Tan Vien *L. hystrix* MASUMOTO.
- 12(11) Body larger (8 mm), sparsely clothed with rather short hairs; elytra with setiferous umbilicate pores, one on 3rd interval, 1 on 7th, and 9 on 9th; Mt. Phang Si Pang *L. sapa* MASUMOTO.

V. Northern Thailand Species

Laena fangensis sp. nov.

(Fig. 13)

Piceous, with antennae, tibiae, tarsi, mouth parts, etc., dark reddish brown, dorsal surface gently and feebly vitreously shining, ventral surface weakly somewhat alutaceously shining; each surface rather sparsely clothed with short bent hairs. Large and rather elongate, convex above though broadly, gently flattened.

Head subparallel-sided, coarsely rugoso-punctate in anterior major portion, closely punctate around neck; clypeus short, rather strongly bent downwards in front, separated from frons by a deep and feebly arcuate sulcus; genae strongly raised, with obtuse outer margins; frons quadrate, gently convex medially, grooved along fronto-genal borders; eyes rather strongly convex laterad, gently inlaid into head, diatone about 7 times the width of an eye diameter. Antennae with ratio of the length of each segment from basal to 7th (4 other segments lost): 0.29, 0.2, 0.38, 0.32, 0.3, 0.3, 0.3, —, —, —, —.

Pronotum 1.2 times as wide as long, widest a little before the middle; apex feebly emarginate; base sublinear, slightly narrower than apex; sides steeply declined to rounded lateral margins, which are finely ridged; front angles angulate, hind angles obtuse in dorsal view; disc gently convex though feebly flattened, weakly impressed at anterior 1/3 in the middle, and also slightly impressed behind the middle on each side, coarsely rugoso-punctate.

Elytra slightly elongated ovate, 1.7 times as long as wide, 2.7 times the length and a little more than 1.3 times the width of pronotum, widest at the middle; dorsum gently convex though distinctly, broadly flattened, with suture strongly impressed in basal portion; disc punctato-striate, the punctures in inner striae rather closely and constantly set, those on outer coarsely and irregularly so, often fused with one another, and forming rugosities; intervals gently convex, each with a row of shallow punctures, 9th ridged, 11th with 3 setiferous umbilicate pores, one at basal 1/5, another at apical 1/5, and the other at apical 1/10; apices gently, roundly produced posteriad.

Profemur with a sharp spine at apical 1/4 of upper side on anterior margin; mesofemur with a blunt angle at apical 1/4 of under side on posterior margin; metafemur with an obtuse angle at apical 1/5 of under side on posterior margin; inner margin of mesotibia feebly thickened and haired in apical half, with a small

hook near apex; metatibia with inner margin hooked at apical $1/5$; ratios of the lengths of pro-, meso- and metatarsomeres: 0.8, 0.6, 0.4, 0.24, 1.2; 0.95, 0.68, 0.5, 0.26, —; 1.74, 1.18. —, —.

Body length: ca. 10.5 mm.

Holotype: ♂, Fang District, Chiang Mai Pref., NW Thailand, 22-V-1993, no collector's name (NSMT).

Laena angkhangensis sp. nov.

(Fig. 14)

Piceous, with antennae and tibiae lighter in colour, mouth parts and tarsi yellowish brown; dorsal surface gently, somewhat vitreously shining, ventral surface somewhat alutaceously shining; each surface rather sparsely clothed with bent hairs. Oblong-ovate, gently convex above though feebly flattened broadly in the median parts.

Head subdecagonal, feebly raised posteriad, closely punctate, often rugose in postero-lateral portions; clypeus transversely hexagonal, bent downwards in apical half, truncate in front, fronto-clypeal border finely sulcate and arcuate anteriad; genae rather strongly raised and almost impunctate, roundly produced obliquely laterad, with areas behind eyes feebly produced laterad in dorsal view; frons quadrate, longitudinally depressed on each side; eyes medium-sized, roundly convex laterad, diatone about 5 times the width of an eye diameter. Antennae with ratio of the length of each segment from 1st to 5th (remaining segments lost): 0.32, 0.2, 0.43, 0.35, 0.31, —, —, —, —, —, —.

Pronotum subcordate, about 1.25 times as wide as long, widest at apical $1/3$, wider at apex than at base; apex slightly emarginate; base almost straight and bordered; sides gently declined to lateral margins, which are strongly produced laterad, and rather distinctly crenulate; front angles obtusely angulate, hind angles rounded; disc gently convex, slightly flattened posteriad, scattered with punctures, sparsely clothed with rather long fine hairs in lateral and posterior portions, very softly, longitudinally impressed medially.

Elytra relatively oblong-ovate, 1.7 times as long as wide, 2.6 times the length and slightly larger than 1.3 times the width of pronotum, widest at basal $4/11$; dorsum gently convex, feebly flattened in basal half, with sutural portion depressed in basal $1/10$; disc punctato-striate, the striae shallow, the punctures on striae rather small; intervals gently convex, with rows of sparse punctures, which are $1/4$ times the size of striae punctures, 3rd intervals with a setiferous umbilicate pore at apical $1/7$, 7th with one at basal $1/8$, 9th with 4, 1st at basal $1/5$, 2nd at apical $3/8$, 3rd at apical $4/19$, and 4th at apical $2/15$; apices roundly projected posteriad.

Legs rather stout; femora strongly thickened and each with an acute spine on

inner margin: in profemur at apical 1/3 of upper side, in mesofemur at apical 1/4 of under side, metafemur at apical 1/4 of under side; ratios of the lengths of pro-, meso- and metatarsomeres: 0.55, 0.37, 0.26, 0.22, 1.2; 0.69, 0.47, 0.31, 0.27, 1.13; 1.15, 0.63, 0.39, 1.31.

Male genitalia slender and nearly straight, 2.4 mm in length and 0.38 mm in width; fused lateral lobes ca. 0.5 mm in length, flattened and spatulate with rounded apex.

Body length: 7.5 mm.

Holotype: ♂, Doi Angkhang, Fang Dist., Chiang Mai Pref., NW Thailand, 7-II-1989, K. MASUMOTO leg. (NSMT).

Key to the *Laena* Species from NW Thailand

- 1(2) Each femur neither spined nor angulate; body smaller (less than 7 mm); 4.8–6.8 mm; Doi Inthanon *L. uenoi* MASUMOTO.
- 2(1) Each femur spined or angulate; body larger (more than 7.5 mm).
- 3(4) Elytra distinctly broadly flattened, with 3 setiferous umbilicate pores on 11th interval; 10.5 mm; Fang Dist. *L. fangensis* sp. nov.
- 4(3) Elytra not distinctly broadly flattened, with setiferous umbilicate pores, 1 on 3rd interval, 1 on 7th and 4 on 9th; 7.5 mm; Doi Angkhang, Fang Dist. *L. angkhangensis* sp. nov.

References

- KASZAB, Z., 1965. Neue Tenebrioniden (Coleoptera) aus China. *Annls. Hist.-nat. Mus. natn. hung.*, (Zool.), 57: 279–284.
- 1970. Fünf neue Tenebrioniden aus Asien (Coleoptera). *Ent. Arb. Mus. Frey*, 21: 112–122.
- 1973. Tenebrioniden (Coleoptera) aus Nepal. *Acta. Zool. Acad. Sci. hung.*, 19: 23–74.
- & M. CHUJO, 1966. Coleoptera from Southeast Asia (V). 14. Familie Tenebrionidae (1). *Mem. Fac. Educ. Kagawa Univ.*, (II), (140): 51–56, pl. 1.
- LATREILLE, M., 1829. Insectes Coléoptères. In CUVIER, G.L.C.F.D. (ed.), *Règne anim.*, 5: XXIV+556 pp., 20 pls. Déterville, Paris.
- MASUMOTO, K., 1989. A new *Laena* (Coleoptera, Tenebrionidae) from Northwest Thailand. *Elytra, Tokyo*, 17: 61–64.
- 1995. A new *Laena* (Coleoptera, Tenebrionidae) from northern Vietnam. *Bull. natn. Sci. Mus.*, Tokyo, (A), 21: 33–36.
- 1996. New tenebrionid beetles of the tribe Strongyliini, Misolampini and Adeliini (Coleoptera) from northern Vietnam. *Ibid.*, (A), 22: 33–43.
- & YIN, W.-y., 1993. Two new Yunnanese beetles of the genus *Laena* (Tenebrionidae) and *Sivacrypticus* (Archeocrypticidae), (Coleoptera). *Elytra, Tokyo*, 21: 239–243.
- 1994. Four new *Laena* species (Coleoptera, Tenebrionidae) from Yunnan, Southwest China. *Ibid.*, 22: 165–170.
- REITTER, E., 1889. Insecta, A Cl. G. N. POTANIS in China et in Mongolia novissime lecta. XIII.

- Tenebrionidae. *Horae Soc. ent. ross.*, 23: 678–710.
- REITTER, E., 1899. Weitere Beiträge zur Kenntniss des Coleopteren-Gattung. *Dt. ent. Z.*, 2: 282–286.
- SCHAWALLER, W., 1995. Neue *Laena*-Arten (Coleoptera: Tenebrionidae) aus Malaysia. *Stuttg. Beitr. Naturk.*, (A), (523): 1–16.
- SCHUSTER, A., 1916. Monographie der Coleopterengattung *Laena* LATREILLE. *Verh. zool.-bot. Ges. Wien*, 66: 495–629.
- 1926. Bestimmungstabelle der *Laena*-Arten aus dem Himalaya und den angrenzenden Gebieten. Mit Beschreibungen neuer Arten. *Koleopt. Rdsch.*, *Wien*, 12: 31–54.
- 1935. Neue *Læna*-Arten aus dem Himalaya (Col. Fam. Tenebrionidæ). *Ann. Mag. nat. Hist.*, (10), 16: 437–466.
- 1940. Über drei neue asiatischen Tenebrioniden (Col. Tenebr.). *Mitt. münchn. ent. Ges.*, 30: 861–866.